

MASTER

GM-3000

OWNER'S MANUAL
MODE D'EMPLOI



PIONEER

SPARE PARTS MASTER

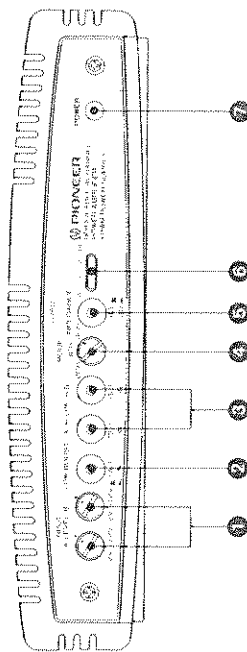
Features

Important

The serial number of this device is located on the bottom of the unit. For your own security and convenience, be sure to record the serial number on the enclosed warranty card. Keep it handy for future reference.

- Pulse width modulation (PWM) is used in the DC/DC converter circuit to give a high power output of 75 W $\times$ 4 (4-channel mode), and 150 W $\times$ 2 (2-channel mode) and to make the unit compact.
- The two-stage, Darlington single-ended push-pull (SEPP) circuit achieves a low harmonic distortion of 0.005% (at 1 kHz and 40 W output).
- The bridgeable function allows switching between 4-channel, 3-channel, and 2-channel modes by simply operating the mode select switch.
- The low boost switch enhances low-frequency sounds.
- The independent low-pass filter (LPF) switches for speaker outputs A and B let you easily set up a sub-woofer system for any mode.
- The use of oxygen-free copper (OFC) speaker leads and audio capacitors assures high-quality sound.
- The large aluminum heatsink gives good radiation to help maintain stable power for extended periods.

Controls and their Use



1 Input Level Controls A and B

Input level control A is used to adjust the volume of speaker output A ; Input level control B is used to adjust the volume of speaker output B. Normally, align the dots (•) on the controls with the marks on the front grill. If the output is low even when the volume of the car stereo is turned up, turn these controls clockwise. If there is distortion when the volume of the car stereo is turned up, turn these controls counter-clockwise.

- Input level controls A and B are used to adjust the balance between the speaker output (output A) and the sub-woofer output (output B) when in 3-channel mode type 2.

2 Low Boost Switch

Press this switch to increase the volume of sounds in the low-frequency range if your car audio system does not reproduce enough bass sounds.

- If there are no low-frequency sounds in the music you are listening to, or if you are using relatively small speakers, this switch may not make much difference.

3 Low-Pass Filter (LPF) Switches A and B

These switches are used to connect a sub-woofer to the amplifier. When a sub-woofer is connected to speaker output A, press low-pass filter switch A to the IN position. When it is connected to speaker output B, press low-pass filter switch B to the IN position.

4 Mode Select Switch

Use this switch to change the mode for inputs A and B and speaker outputs A and B to 4-channel, 2-channel, or 3-channel mode. See page 5 for details.

- Before switching the mode, be sure to turn the power off.

5 Load Impedance Select Switch

Press this switch when the impedance of the speaker or speakers connected to this amplifier is less than 4 ohm.

6 Fuse Window

There are a fuse for accessories and a fuse for illumination behind the front grill. (See "Replacing Fuses" on page 13.)

7 Power Indicator

The power indicator lights when the power is switched on.

Connecting the Units

Connect the components correctly as shown in the diagram.

- Test-connect all components before securing them into place. Test-operate your entire car stereo system to ensure that there are no faulty wiring connections between this unit and the rest of your car stereo system.
- It is recommended that the speakers connected to the amplifier should have the appropriate minimum ratings shown below. If any speaker has a rating is below that recommended, the speaker may be damaged when the volume is turned up too high. The speaker impedance must be 2 ohm to 8 ohm.

Mode	Speaker
4-channel	Minimum rating: 75 W
2-channel	Minimum rating: 150 W
3-channel	
Speaker output (A)	Minimum rating: 40 W
Sub-woofer output (B)	Minimum rating: 150 W

- For detailed information concerning connections between different components and this unit consult their respective instruction manuals and follow those recommendations precisely.
- When wiring connecting leads into place secure them with clamps and adhesive electrician's tape. Additionally, to prevent any damage to the insulative coating of the connecting leads, protect them with adhesive electrician's tape wherever they may come into contact with any sharp edges.

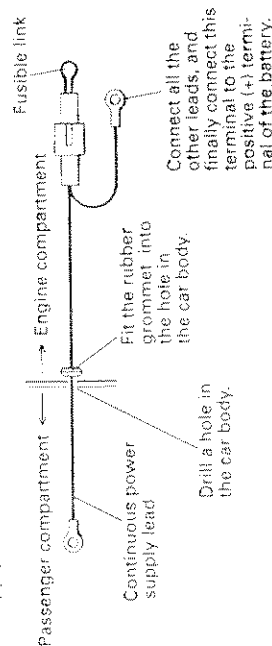
- Wire all connecting leads so that they stay well clear of high-temperature areas such as the heater exhaust port.
- To operate the amplifier and car stereo properly, install the continuous power supply lead (orange) and the accessory power lead (red) correctly. If the leads are not installed correctly or are not connected at all, the amplifier and car stereo will not work.
- One or two of the four speaker leads supplied may be unnecessary in the mode used. Keep the unused leads for future use.

General Amplifier Installation Guidelines for Power Supply Leads

1. Disconnect the negative (-) battery terminal first. This will avoid sparks if you short the battery with a wrench (negative terminals can not short out).
2. Route all leads and connections to proper locations.
3. Connect speaker leads, amplifier ground, amplifier power (orange) to battery, ignition and trigger leads.
4. Connect RCA connectors from source unit to amplifier.
5. Carefully check all connections made to this point. The amplifier should be ready to operate as soon as the battery is reconnected.
6. Reconnect the negative battery terminal of the battery and test the installation.

Connecting Leads (Supplied)

- Connecting the Continuous Power Supply Lead (Orange)**
- Route the continuous power supply lead from the engine compartment to the passenger compartment and connect it to the amplifier. To prevent short-circuits, make sure you connect all the other leads first, then connect the end of the continuous power supply lead to the positive (+) terminal of the battery.



CAUTION

- The fusible link is a safety device
DO NOT DEFEAT ITS PURPOSE
 - Should the fusible link blow
 - Check the continuous power supply lead for possible cause of short circuit.
 - DO NOT replace the fusible link with any other similar fuse available on the market or bypass the fusible link, as it may cause damage to the unit or to the car electrical system. Contact your dealer or the nearest authorized PIONEER Service Station immediately.
- Be sure to bring the continuous power supply lead when taking the unit for repair.

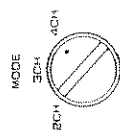
Connecting the Speaker Leads and Connecting Leads with RCA Pin Plugs

- This amplifier lets you switch the speaker output to 4-channel (2 inputs/4 speakers), 2-channel (1 input/2 speakers) or 3-channel (2 inputs/3 speakers, 1 input/3 speakers) mode with the mode select switch. Therefore, it is necessary to connect the speaker leads and connecting leads with RCA pin plugs differently depending on the mode used. Connect them as shown in Fig. 1 to 4.

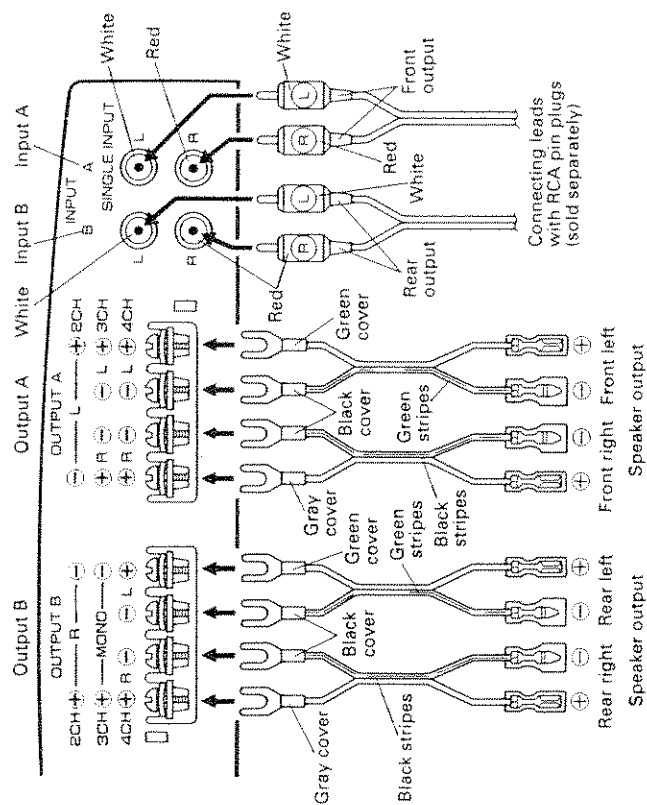
4-channel mode	- Input A/B (2 inputs) 4 speakers (front/rear)	Fig. 1
2-channel mode	- Input A (1 input) 2 speakers	Fig. 2
3-channel mode type 1	- Input A/B (2 inputs) 2 speakers + sub-woofer (mono)	Fig. 3
3-channel mode type 2	- Input A (1 input) 2 speakers + sub-woofer (mono)	Fig. 4

Fig.1 — When using 4-channel mode

- Move the mode select switch to the 4CH position.



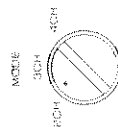
- When a sub-woofer is used, connect it to the rear speaker output (output B), and press the low-pass filter B (LPF B) switch to the IN position.



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Fig.2 — When using 2-channel mode

- Move the mode select switch to the 2CH position.



- Connect the output of the car stereo to input A of the amplifier.

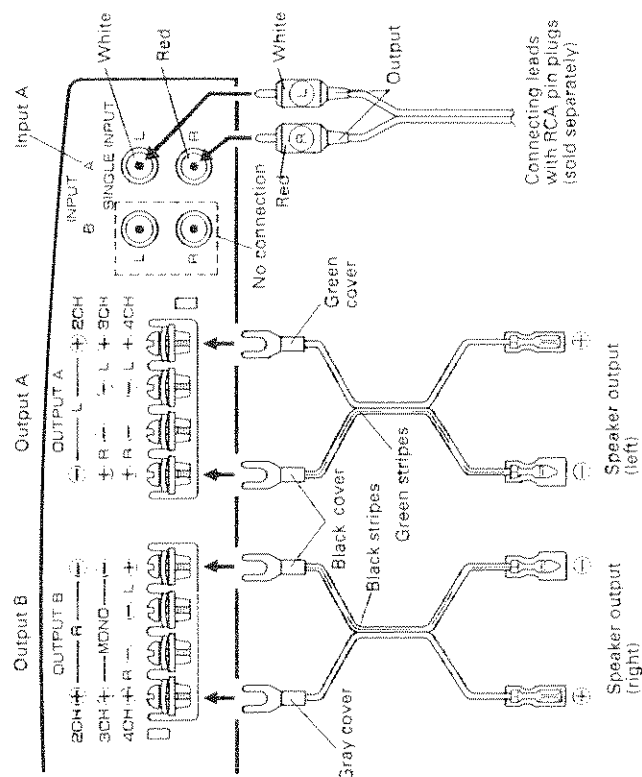
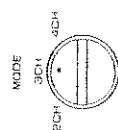


Fig.3 — When using 3-channel mode type 1

- Move the mode select switch to the 3CH position.



- Connect the rear output terminal of the car stereo to input B of the amplifier. (It becomes the mono output for a sub-woofer.)
- Connect a sub-woofer to the sub-woofer output (output B) and press the low-pass filter B (LPF B) switch to the IN position.

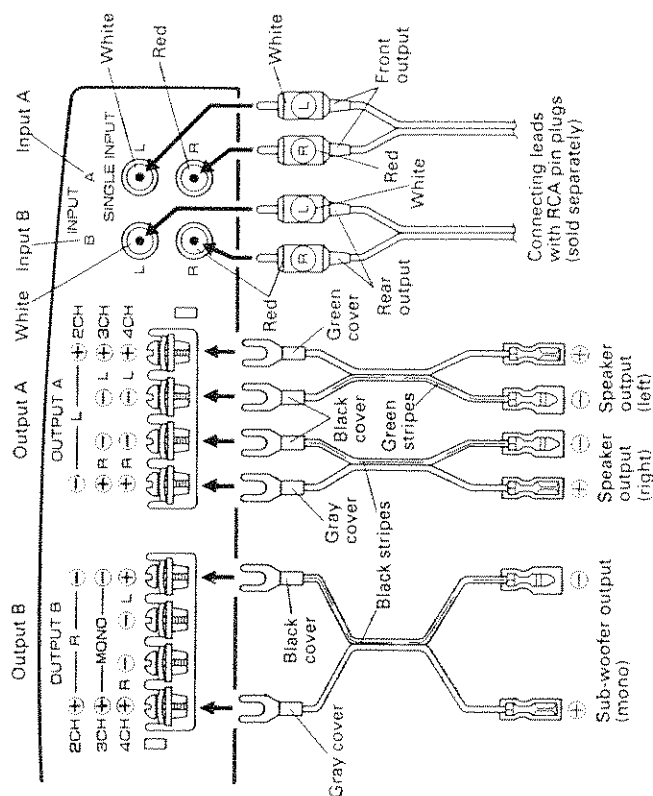
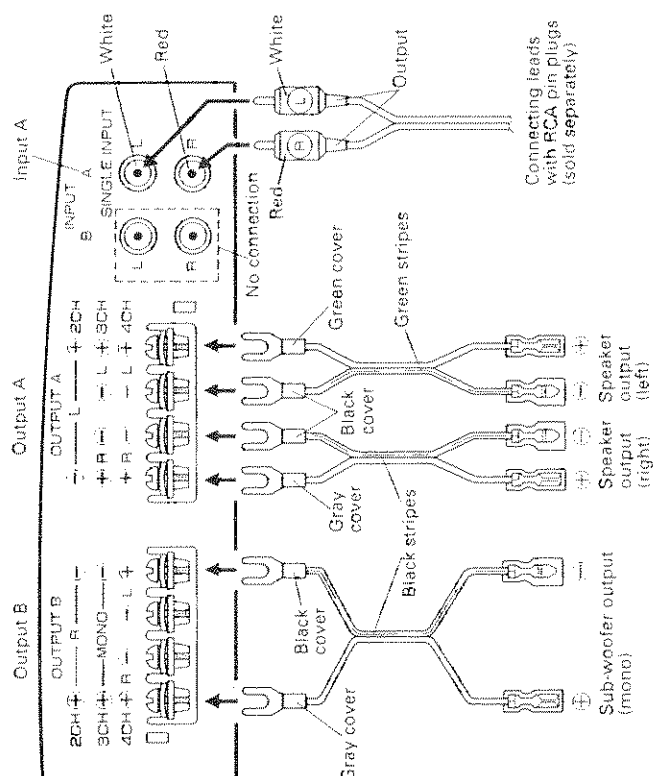
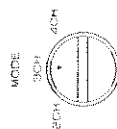


Fig. 4 — When using 3-channel mode type 2

- Move the mode select switch to the 3CH position.



- Connect the output of the car stereo to input A of the amplifier.
- Connect a sub-woofer to the sub-woofer output (output B) and press the low-pass filter B (LPF B) switch to the IN position.
- The balance between the main speakers (output A) and the sub-woofer (output B) is adjusted with input level controls A and B. Input level control A is used to adjust the volume of all the speakers in the system; input level control B, the relative volume of the sub-woofer. Put on some music and adjust the volumes as follows until you get the best sound:
 1. Align the dot (•) on input level control B with the mark on the front grill.
 2. Adjust the volume of all speakers in the system with input level control A.
 3. Adjust the balance between the main speakers and the sub-woofer by now using input level control B.

Connecting leads with RCA pin plugs (sold separately)

Procedure for Connecting Speaker Leads

1. Loosen the eight output terminal screws at the rear of the amplifier in the middle.
2. Insert each speaker lead terminal into an output terminal according to the selected mode. (Fig. 1)
3. Tighten each output terminal screw.
4. Fit the large terminal cover. (Fig. 2)

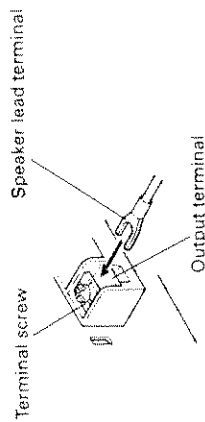


Fig. 1

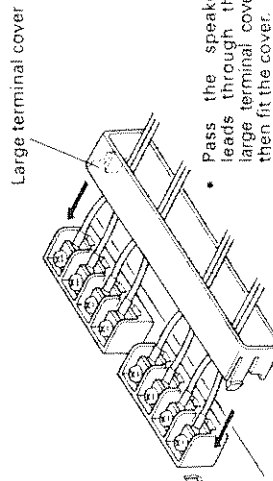


Fig. 2

Procedure for Connecting Continuous Power Supply Lead (Orange) and Grounding Lead (Black)

1. Pass the continuous power supply lead (orange) and the grounding lead (black) through the small terminal cover. (Fig. 3)
2. Remove the screws of the continuous power supply terminal and the grounding terminal at the rear of the amplifier on the left.
3. Replace the screws removed in step 2 in the terminals and tighten them. (Fig. 4)
4. Fit the small terminal cover. (Fig. 5)

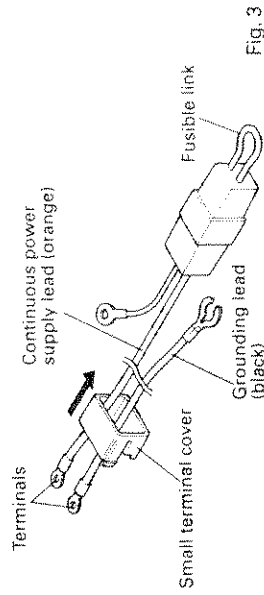


Fig. 3

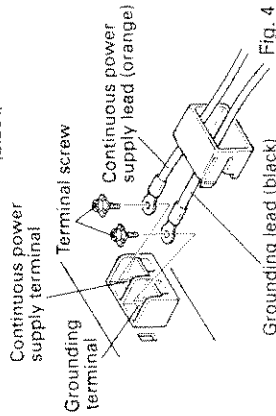


Fig. 4

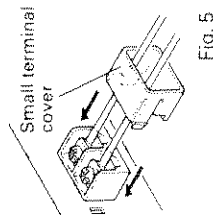
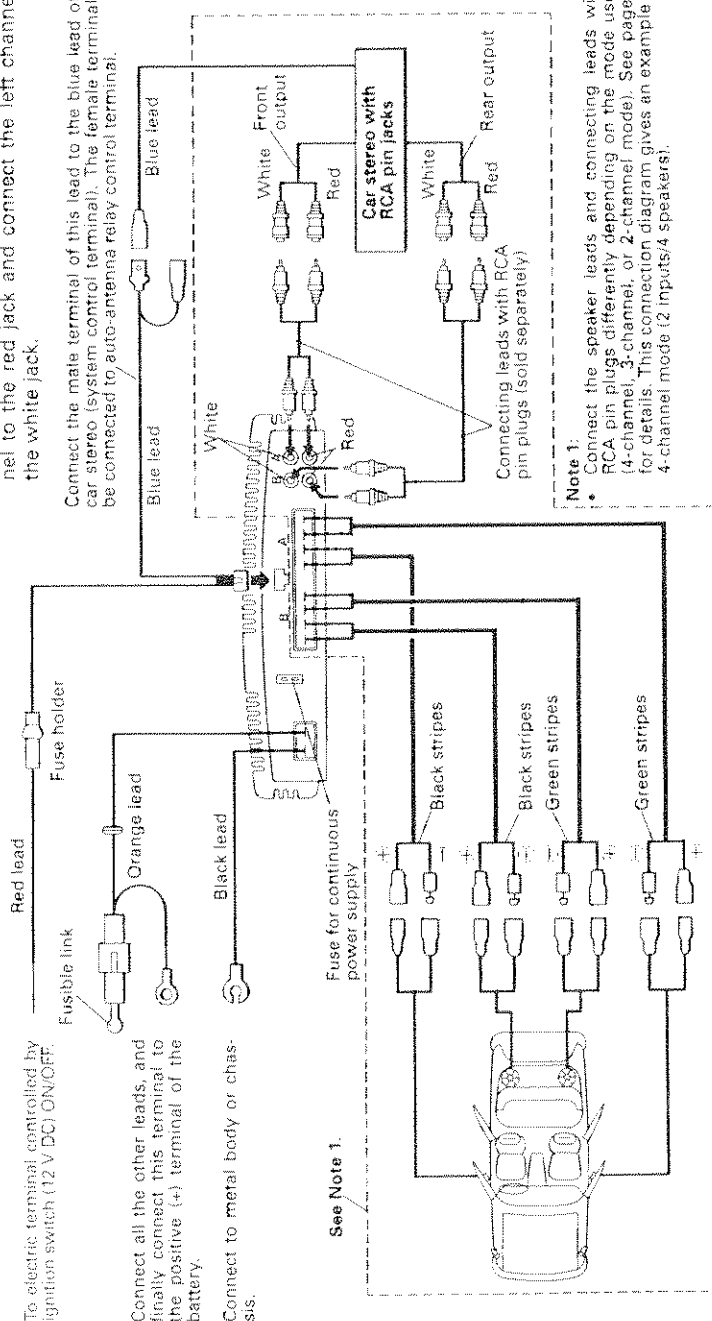


Fig. 5

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- When connecting connecting leads with RCA pin plugs (sold separately) to the auxiliary input jacks (red and white) of this unit, connect the right channel to the red jack and connect the left channel to the white jack.

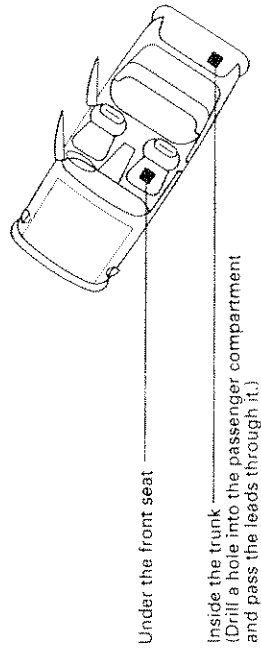
Connect the male terminal of this lead to the blue lead of the car stereo (system control terminal). The female terminal can be connected to auto-antenna relay control terminal.



Installation

- Be sure to use the parts supplied and install the unit securely. If parts other than those supplied (specified) are used, they may loosen or cause damage to internal parts.
 - Be sure to install the unit in a place where the driver is not bothered and where there is no danger of passengers being injured in case of sudden stops.
 - Be sure to consult your dealer before making any holes in the car.
 - Cooling efficiency is degraded by making installations in hot places such as near the heater outlet, in the glove compartment and under floor mats that are tightly closed.
 - To prevent short-circuits, be sure to disconnect the negative battery terminal before wiring the system up.
- When you finish the installation, be sure to make one more check to be sure everything is done correctly. Reinstall all car parts that were removed. Reconnect the negative battery lead.

Example of Positions of Installation



① Attaching the Brackets

Using the 5 x 6 mm screws supplied, attach the supplied pair of brackets to the bottom face of the unit as shown in Fig. 1. If the unit is installed directly on the car floor without using the supplied brackets it may overheat, causing the protection circuitry to operate.

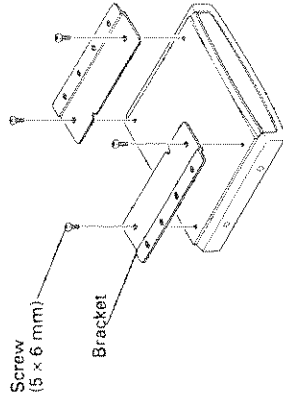


Fig. 1

② For Installation on the Floor Mat or Chassis

Install the unit on the floor mat or the chassis using the supplied tapping screws (5 x 16 mm). (Fig. 2)

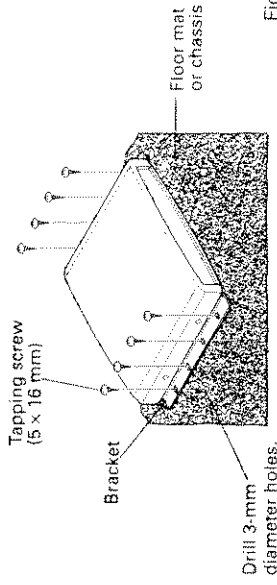


Fig. 2

Replacing Fuses

- Remove the front grill of the amplifier to replace the fuse for accessory power supply (ACC).
 - The fuse for continuous power supply is at the rear of the unit.
 - The accessory power supply lead (red) has a fuse. If the car stereo will not power up, check this fuse, too.
1. Remove the two screws that hold the front grill. (Fig. 1)
 2. Remove the front grill by pulling it toward you.
 3. When the front grill is removed, a fuse will be seen. Use a commercially available fuse grip to remove the fuse. Replace it with a new one having the rating shown on the front grill. (Fig. 2)
 4. After replacing the fuse, put the front grill back.

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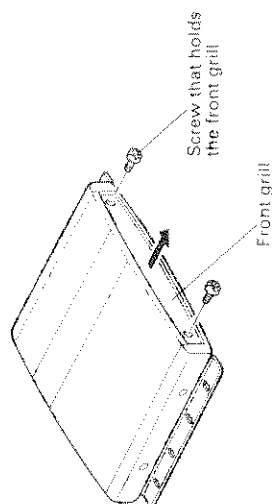


Fig. 1

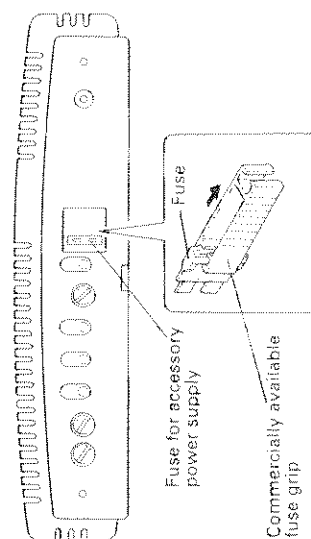


Fig. 2

Care and Maintenance

- Enough care must be taken against battery overdischarge caused by long operation of the set at a high sound level when the engine is not running or is idling.
- The protection circuitry will operate instantaneously should any malfunctions occur, shutting off all sound. Under such circumstances, disconnect the power of the car stereo system, check the wiring for any possible causes and correct them before operating the stereo system again.
- When replacing the fuse, replace it with a fuse having the correct capacity.
- Dust the heat sinks occasionally so that they will not become clogged.

In Case of Trouble

When the unit does not operate properly, contact your dealer or the nearest authorized PIONEER Service Station.

Specifications

Power source	14.4 V DC (10.8-15.6 V allowable)
Grounding system	Negative type
Max. current consumption	25 A
Dimensions	290 (W) × 62 (H) × 230 (D) mm [11-3/8 (W) × 2-1/2 (H) × 9 (D) in.]
Weight	5.0 kg (11.0 lbs.) (Leads for wiring not included)
Maximum power output	150 W × 2 / 75 W × 4 / 40 W × 2 + 150 W × 1
Continuous power output	90 W × 2 / 45 W × 4 / 24 W × 2 + 90 W × 1 (at 4 Ω, 1 kHz, 1% THD)
	70 W × 2 / 40 W × 4 (at 4 Ω, 20-20,000 Hz, 0.03%/0.015% THD)
Load impedance	4 Ω (2-8 Ω allowable)
Frequency response	10-50,000 Hz (+0 dB, -1 dB)
Signal-to-noise ratio	103 dB (HF-A network)
Distortion	0.005% (at 40 W, 1 kHz)
Low-pass filter cut-off frequency	80 Hz
Low-pass filter cut-off slope	12 dB/octave
Low boost level	+6 dB (100 Hz)
Input level	0.2-2 V / 7 kΩ

These specifications were determined and are presented in accordance with specification standards established by the Ad Hoc Committee of Car Stereo Manufacturers.

Note:

Specifications and the design are subject to possible modification without notice due to improvements.